

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number
WO 2005/083851 A3

(51) International Patent Classification⁷: **H01S 3/06**, 3/08

(21) International Application Number:
PCT/GB2005/000678

(22) International Filing Date: 23 February 2005 (23.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0403955.8 23 February 2004 (23.02.2004) GB
0424271.5 2 November 2004 (02.11.2004) GB

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(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

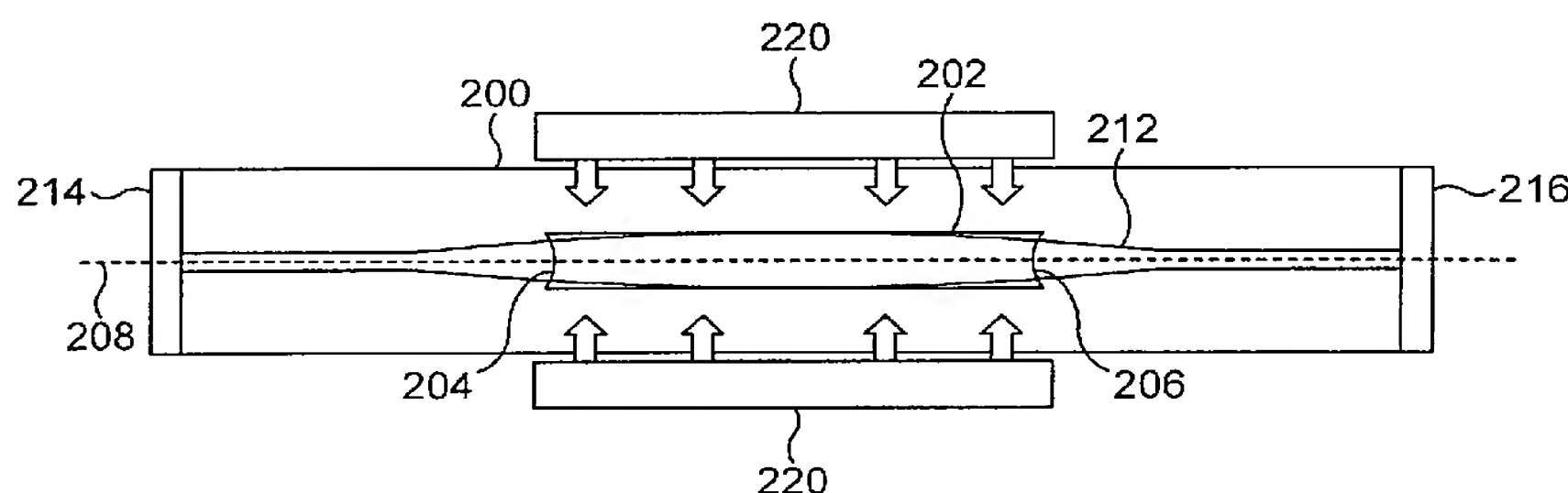
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: A LASER APPARATUS



(57) Abstract: In a first embodiment, the invention makes use of a Neodymium doped YAG (Nd:Y.A.G) gain medium (202) placed in an optical resonant cavity (200) formed by two mirrors (214, 216). Power extraction is maximised for a specific laser cavity. In particular the concave curvature on the rod ends (204, 206) contributes a negative lensing component to modify the strength of the thermal lens. In a second embodiment the present invention uses an amplifier rod medium (800) with curved ends (802, 804) to act as lensing elements to collect emission from laser gain medium and or oscillator described in the first embodiment of the invention. The combination of thermal lens and curved rod ends produces a lensing effect which allows light to be directly coupled from a laser. In addition, variation of the input pump power allows for control of the thermal lens formed within the amplifier rod.

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(88) Date of publication of the international search report:
15 December 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.